OIPE IAP43
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PATENT & TRADEMARK OFFICE

FIGURE 1

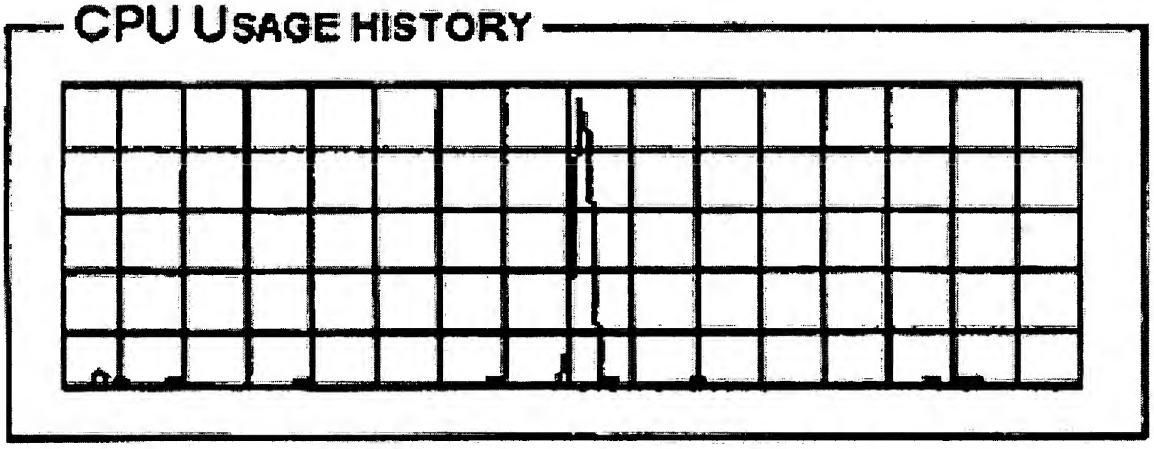

FIGURE 2

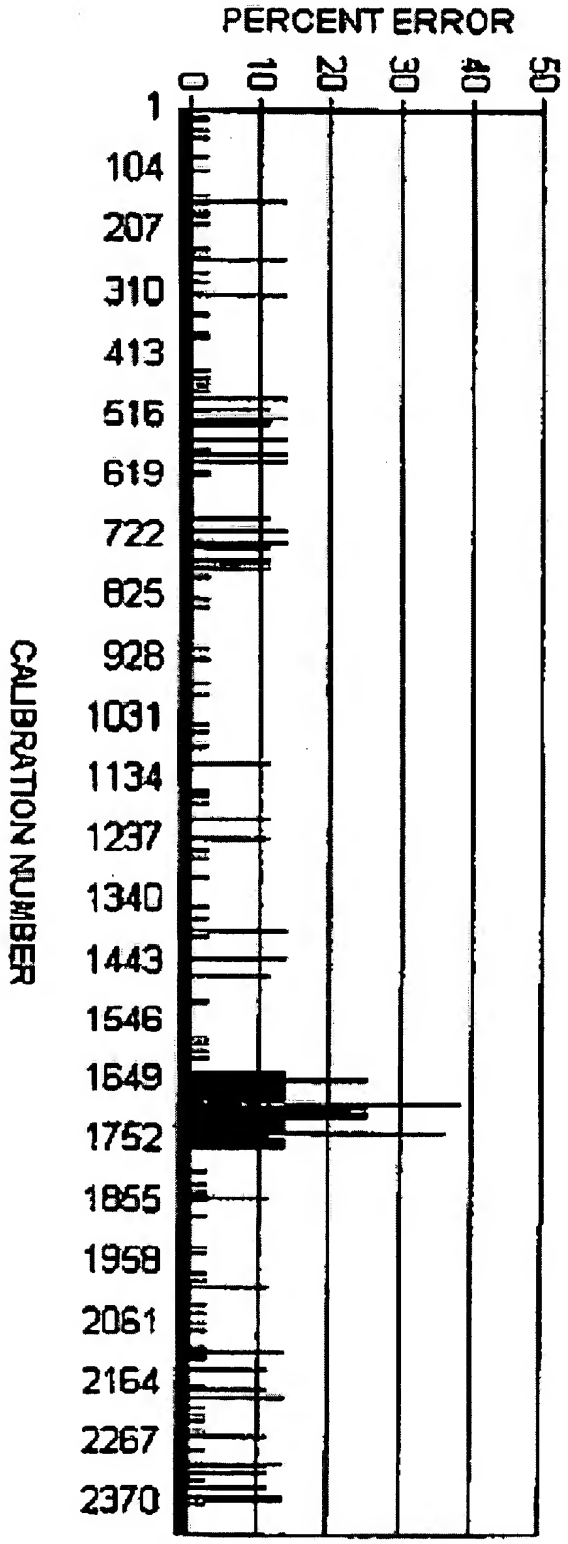
PERCENT ERROR
0
10
20
30
40
50
CALIBRATION NUMBER
1
104
207
310
413
516
619
722
825
928
1031
1134
1237
1340
1443
1546
1649
1752
1855
1958
2061
2164
2267
2370

FIGURE 3

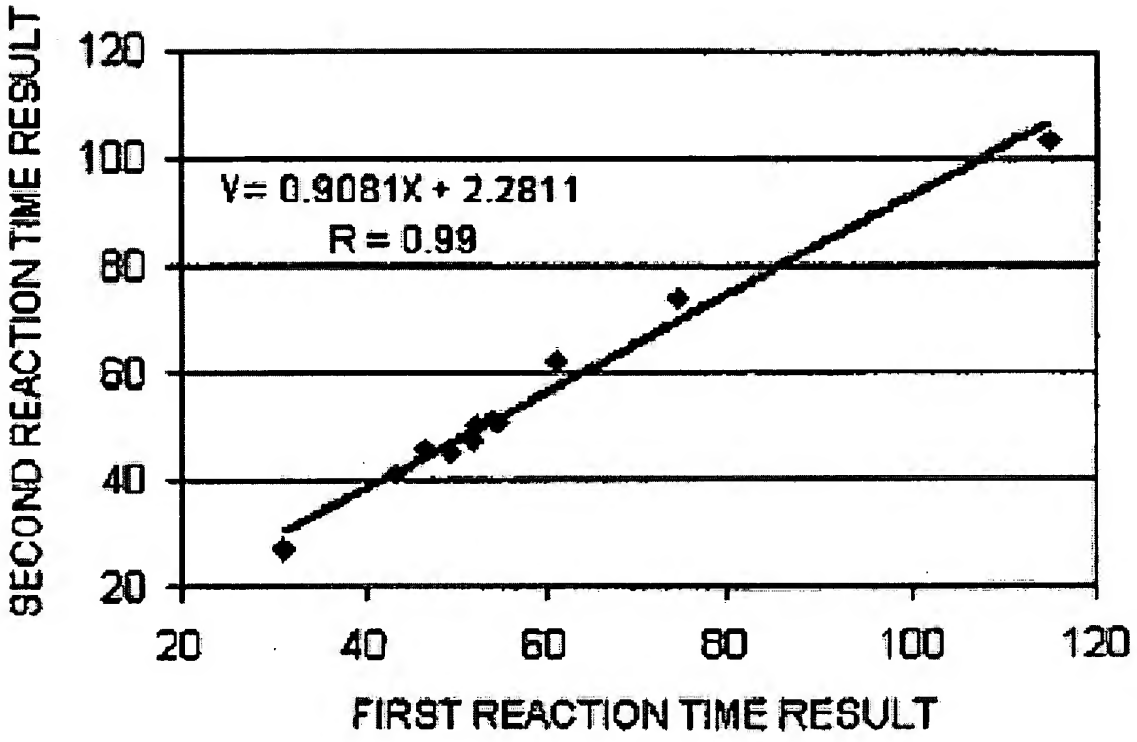
SECOND REACTION TIME RESULT
120
100
80
60
40
20
Y= 0.9081X + 2.2811
R = 0.99
20
40
60
80
100
120
FIRST REACTION TIME RESULT

FIGURE 4

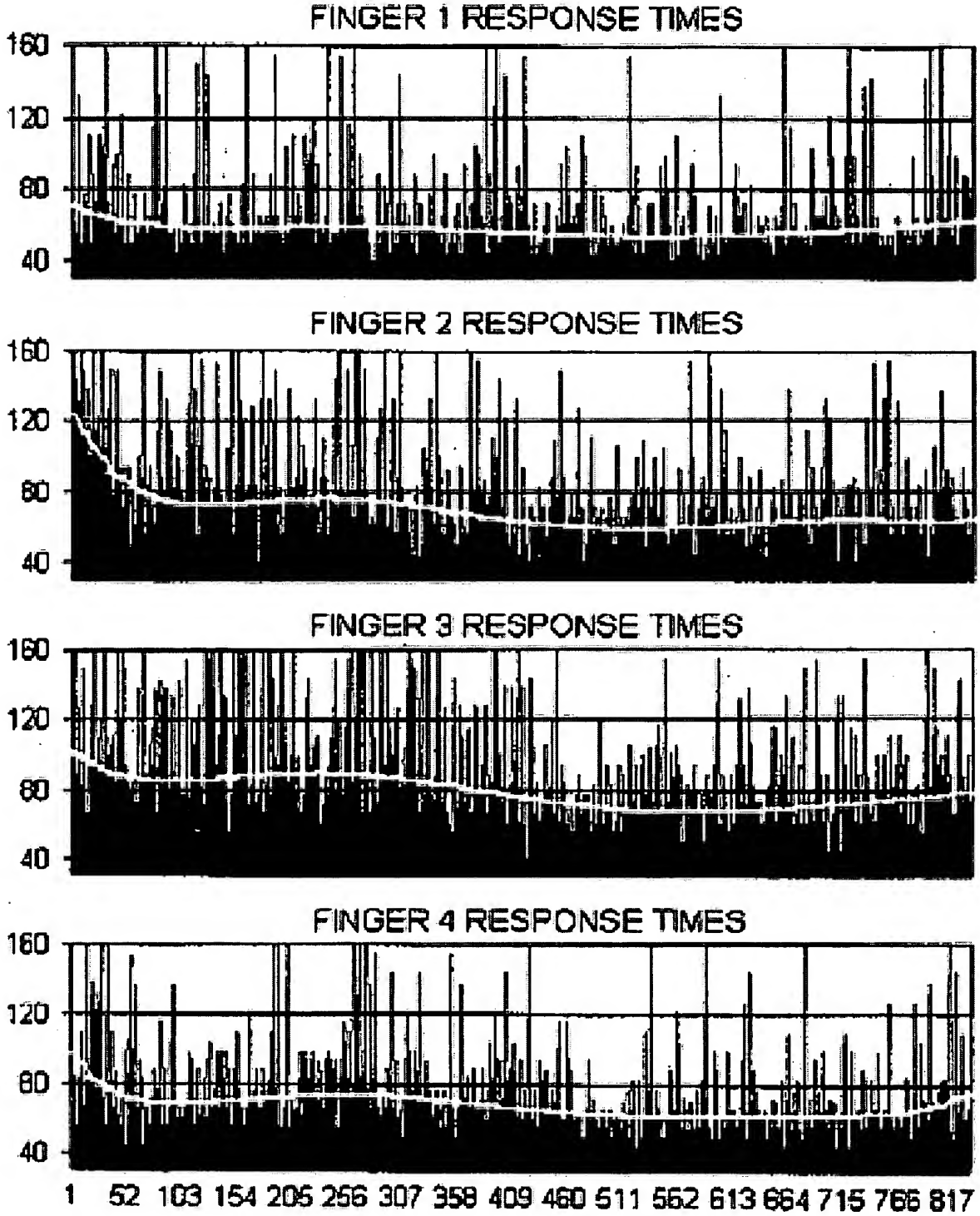
FINGER 1 RESPONSE TIMES
160
120
80
40
FINGER 2 RESPONSE TIMES
160
120
80
40
FINGER 3 RESPONSE TIMES
160
120
80
40
FINGER 4 RESPONSE TIMES
160
120
80
40
1 52 103 154 205 256 307 358 409 460 511 562 613 664 715 766 817

FIGURE 5: INSTRUCTIONS FOR PRECISE DECISION SPEED MEASUREMENT

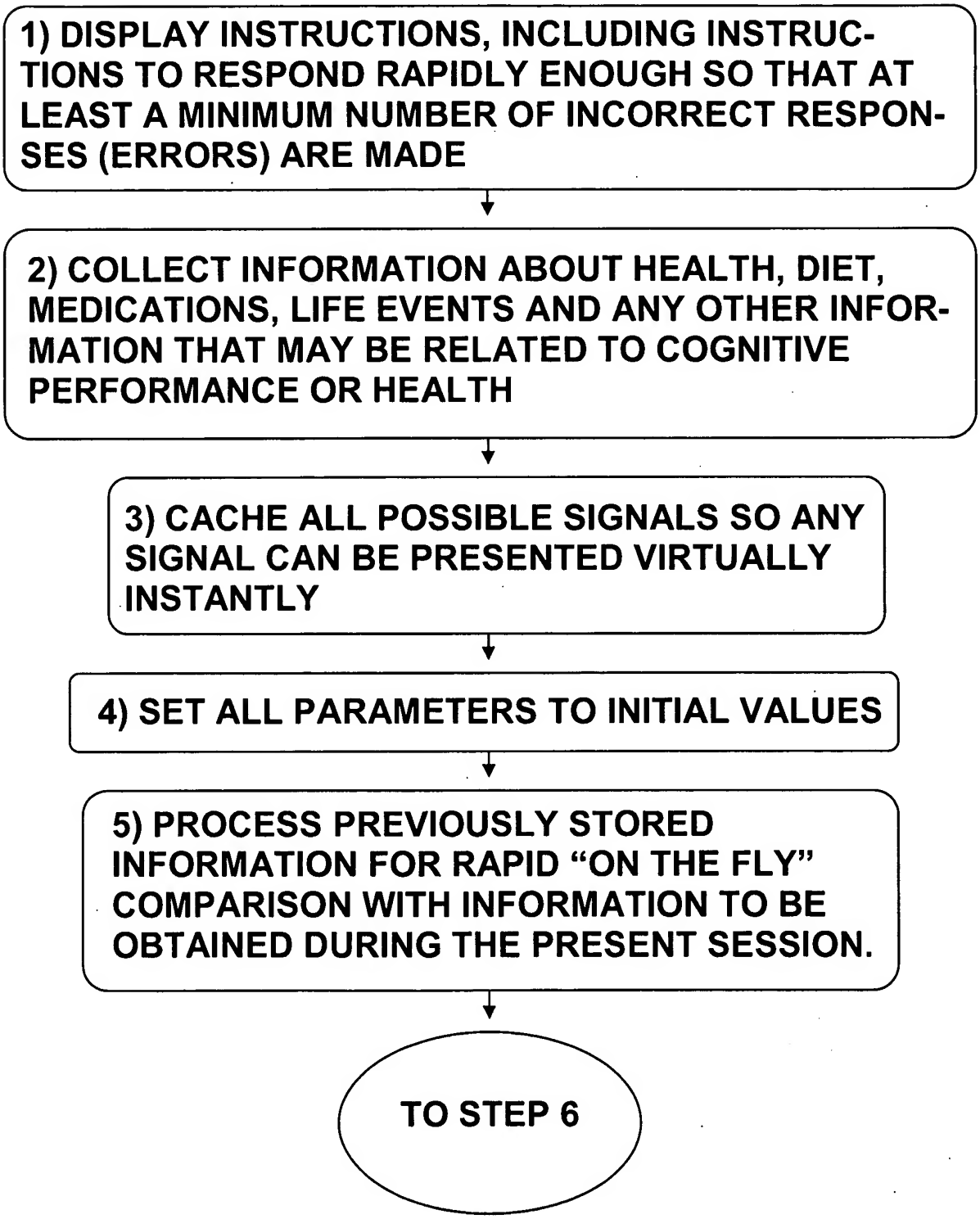

FIGURE 6A: WHEN BEGIN IS PRESSED

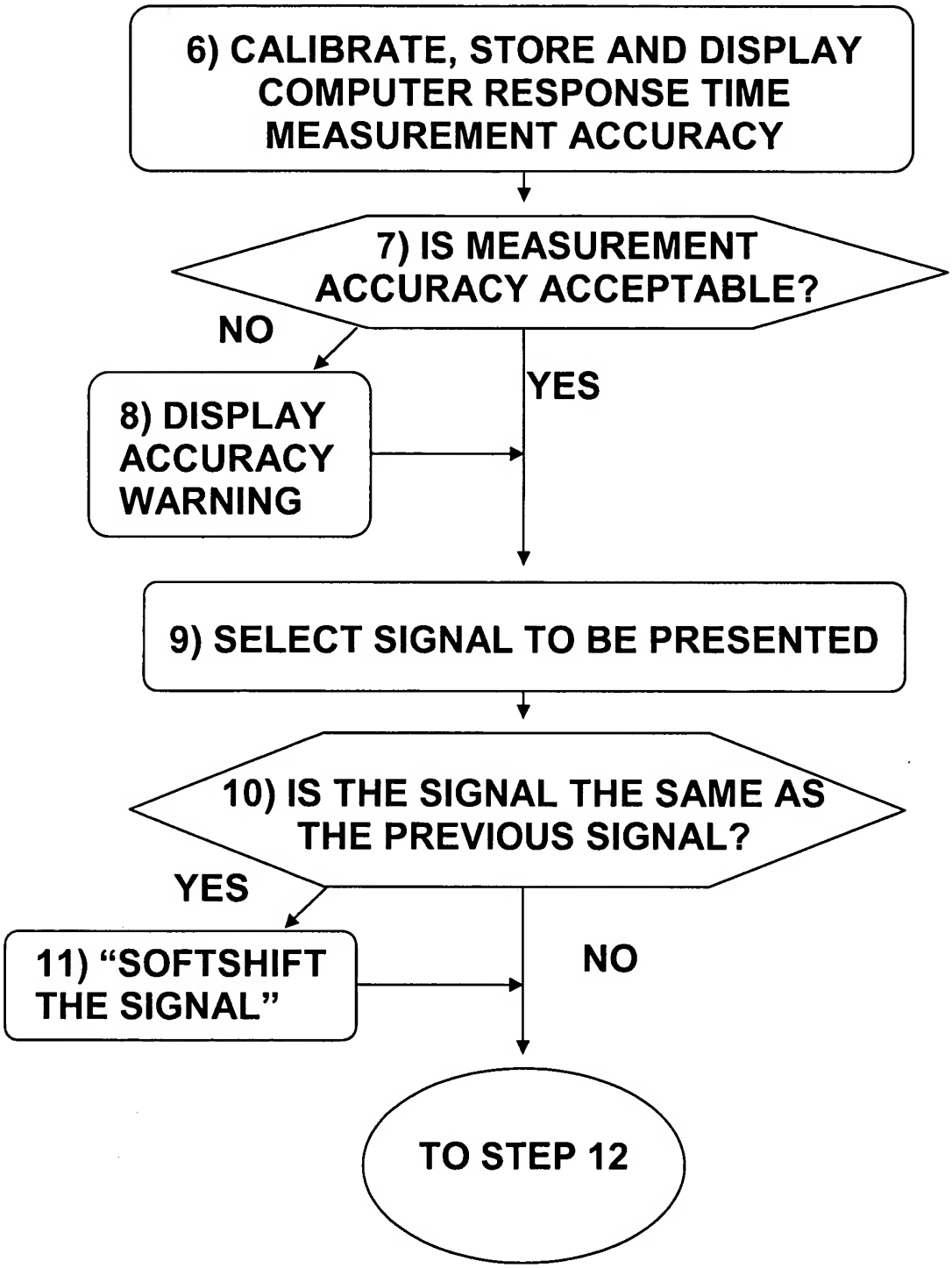

FIGURE 6A: WHEN BEGIN IS PRESSED

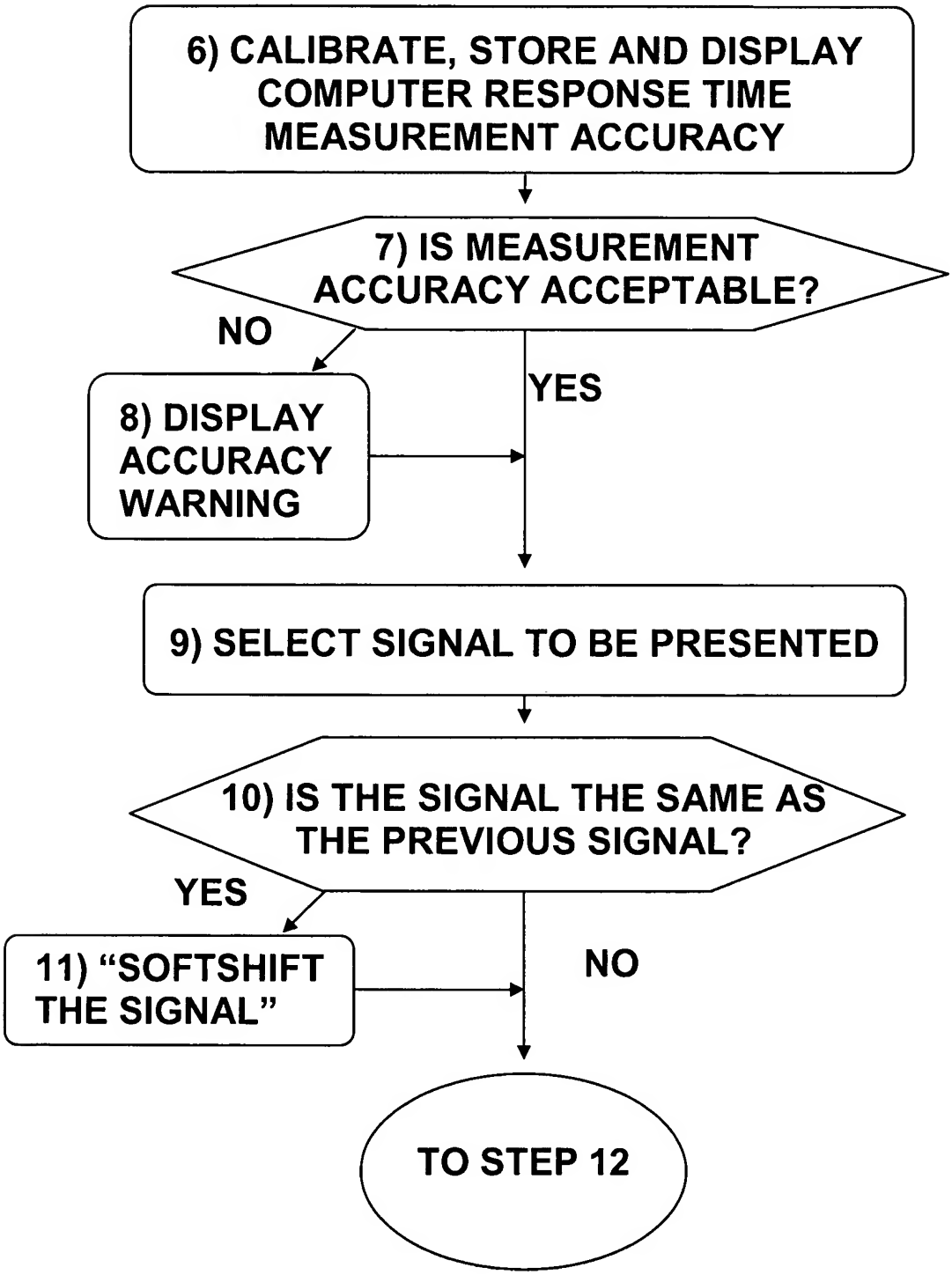

FIGURE 7A

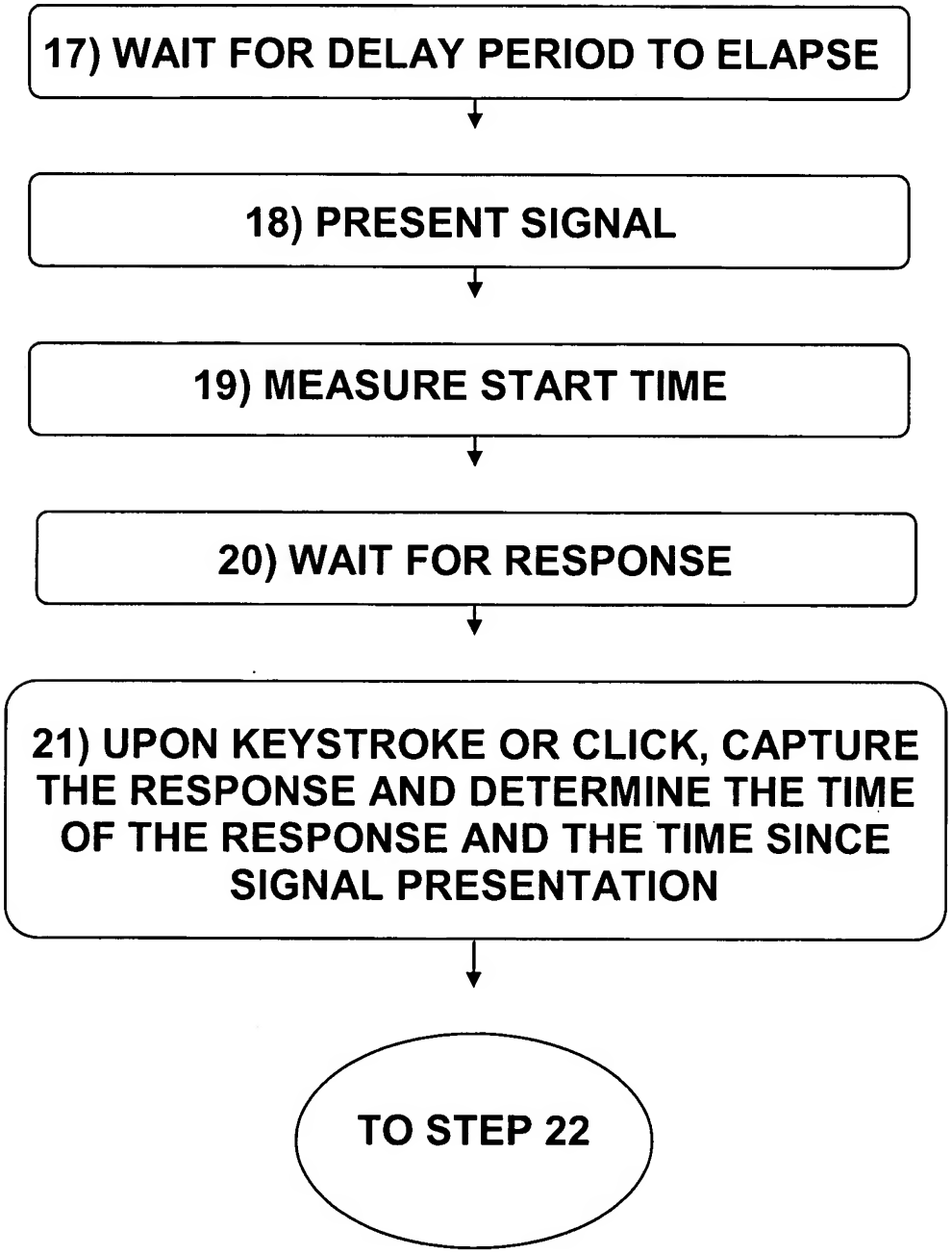
17) WAIT FOR DELAY PERIOD TO ELAPSE
18) PRESENT SIGNAL
19) MEASURE START TIME
20) WAIT FOR RESPONSE
21) UPON KEYSTROKE OR CLICK, CAPTURE THE RESPONSE AND DETERMINE THE TIME OF THE RESPONSE AND THE TIME SINCE SIGNAL PRESENTATION
TO STEP 22

FIGURE 7B

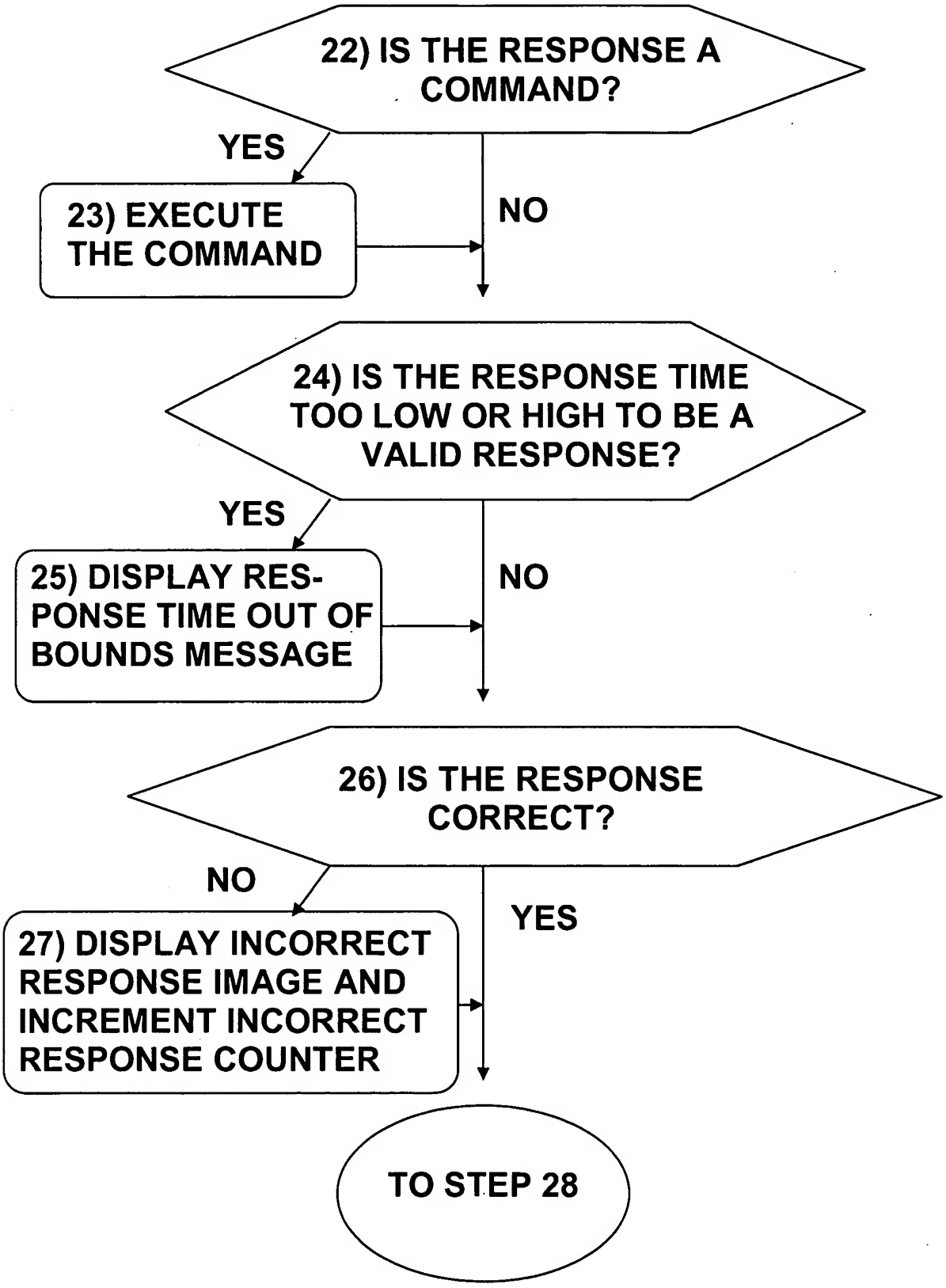
22) IS THE RESPONSE A COMMAND?
YES
NO
23) EXECUTE THE COMMAND
24) IS THE RESPONSE TIME TOO LOW OR HIGH TO BE A VALID RESPONSE?
YES
NO
25) DISPLAY RES-PONSE TIME OUT OF BOUNDS MESSAGE
26) IS THE RESPONSE CORRECT?
NO
YES
27) DISPLAY INCORRECT RESPONSE IMAGE AND INCREMENT INCORRECT RESPONSE COUNTER
TO STEP 28

FIGURE 7C

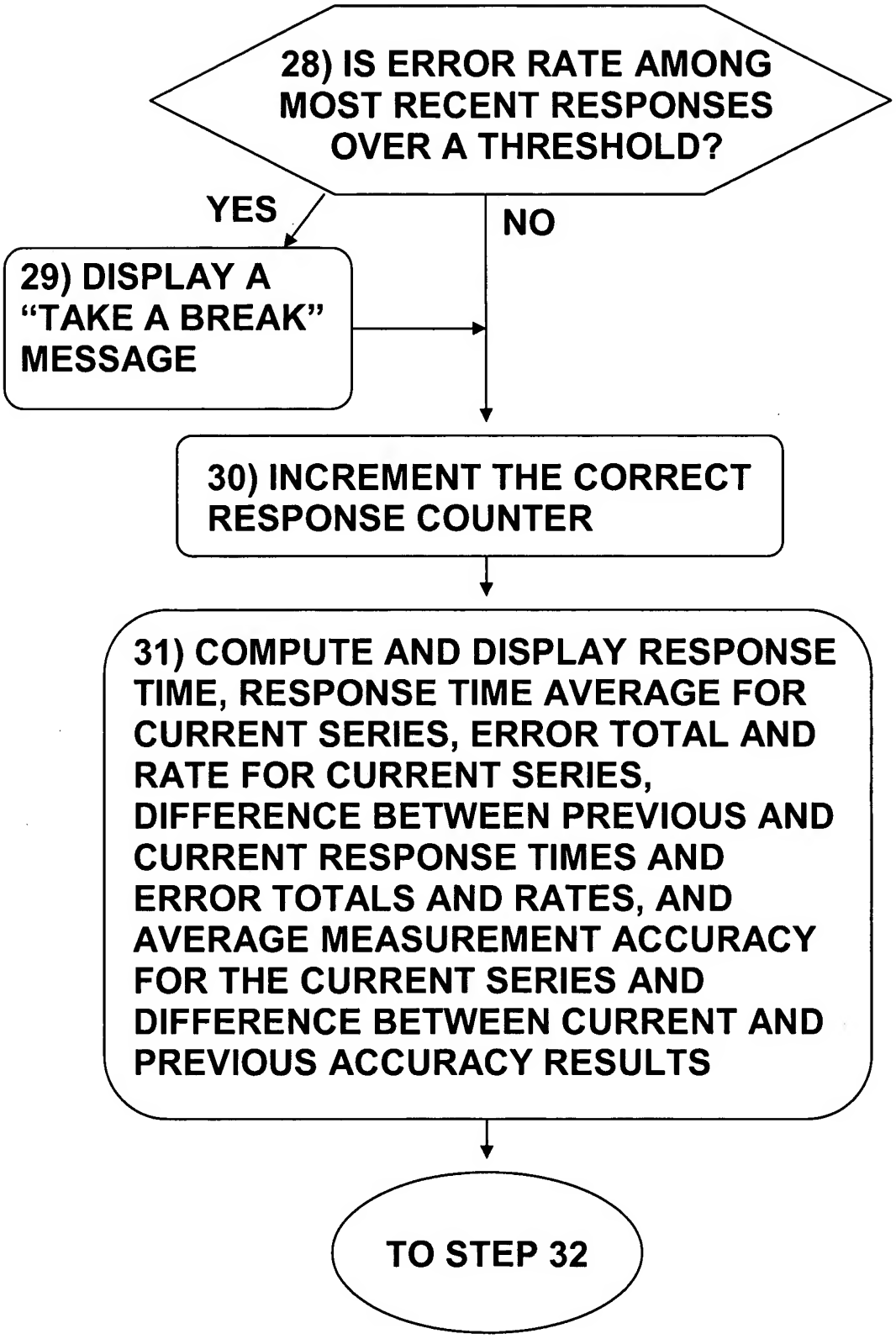
28) IS ERROR RATE AMONG MOST RECENT RESPONSES OVER A THRESHOLD?
YES
NO
29) DISPLAY A "TAKE A BREAK" MESSAGE
30) INCREMENT THE CORRECT RESPONSE COUNTER
31) COMPUTE AND DISPLAY RESPONSE TIME, RESPONSE TIME AVERAGE FOR CURRENT SERIES, ERROR TOTAL AND RATE FOR CURRENT SERIES, DIFFERENCE BETWEEN PREVIOUS AND CURRENT RESPONSE TIMES AND ERROR TOTALS AND RATES, AND AVERAGE MEASUREMENT ACCURACY FOR THE CURRENT SERIES AND DIFFERENCE BETWEEN CURRENT AND PREVIOUS ACCURACY RESULTS
TO STEP 32

FIGURE 7D

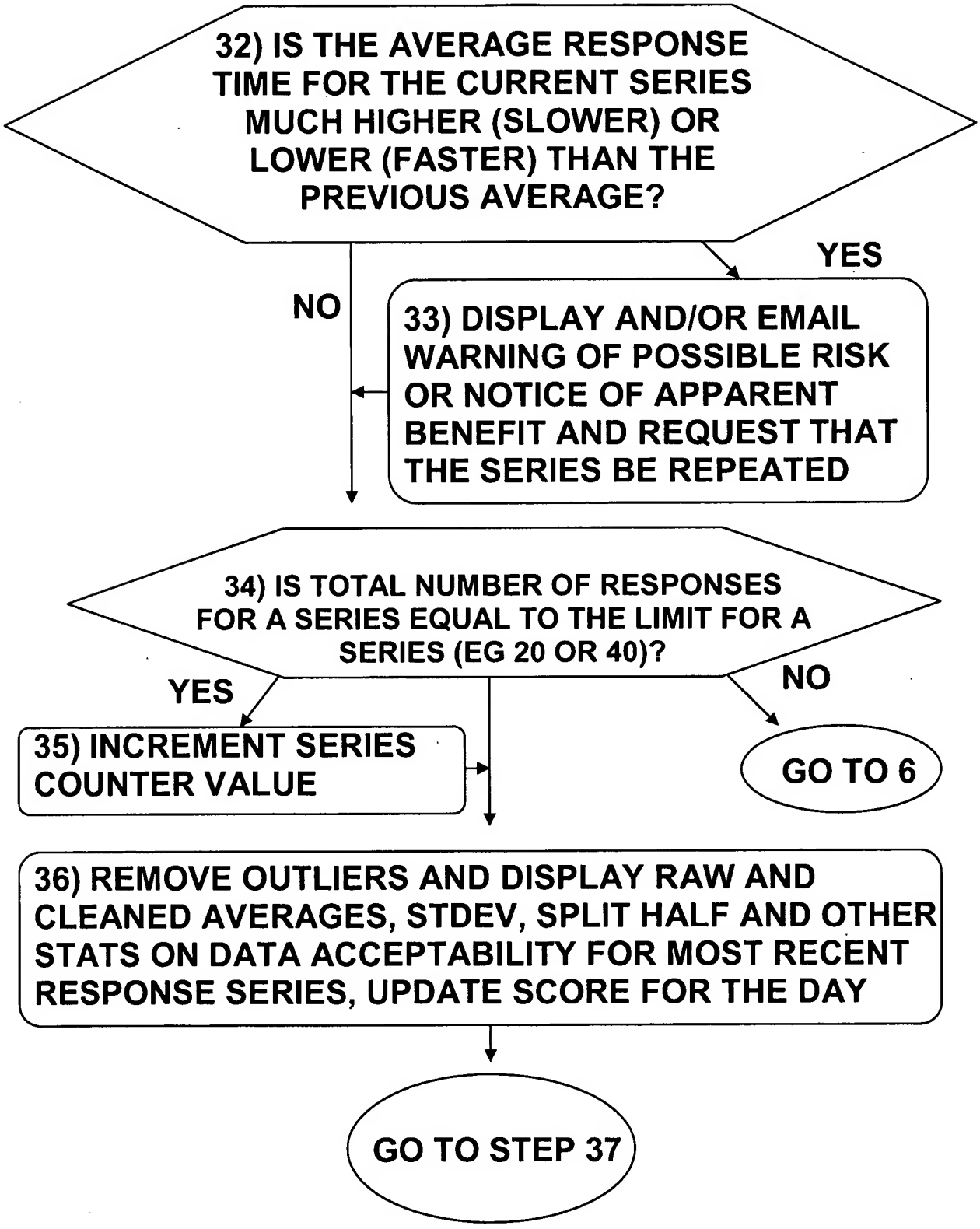
32) IS THE AVERAGE RESPONSE TIME FOR THE CURRENT SERIES MUCH HIGHER (SLOWER) OR LOWER (FASTER) THAN THE PREVIOUS AVERAGE?
YES
NO
33) DISPLAY AND/OR EMAIL WARNING OF POSSIBLE RISK OR NOTICE OF APPARENT BENEFIT AND REQUEST THAT THE SERIES BE REPEATED
34) IS TOTAL NUMBER OF RESPONSES FOR A SERIES EQUAL TO THE LIMIT FOR A SERIES (EG 20 OR 40)?
YES
NO
35) INCREMENT SERIES COUNTER VALUE
GO TO 6
36) REMOVE OUTLIERS AND DISPLAY RAW AND CLEANED AVERAGES, STDEV, SPLIT HALF AND OTHER STATS ON DATA ACCEPTABILITY FOR MOST RECENT RESPONSE SERIES, UPDATE SCORE FOR THE DAY
GO TO STEP 37

FIGURE 7E

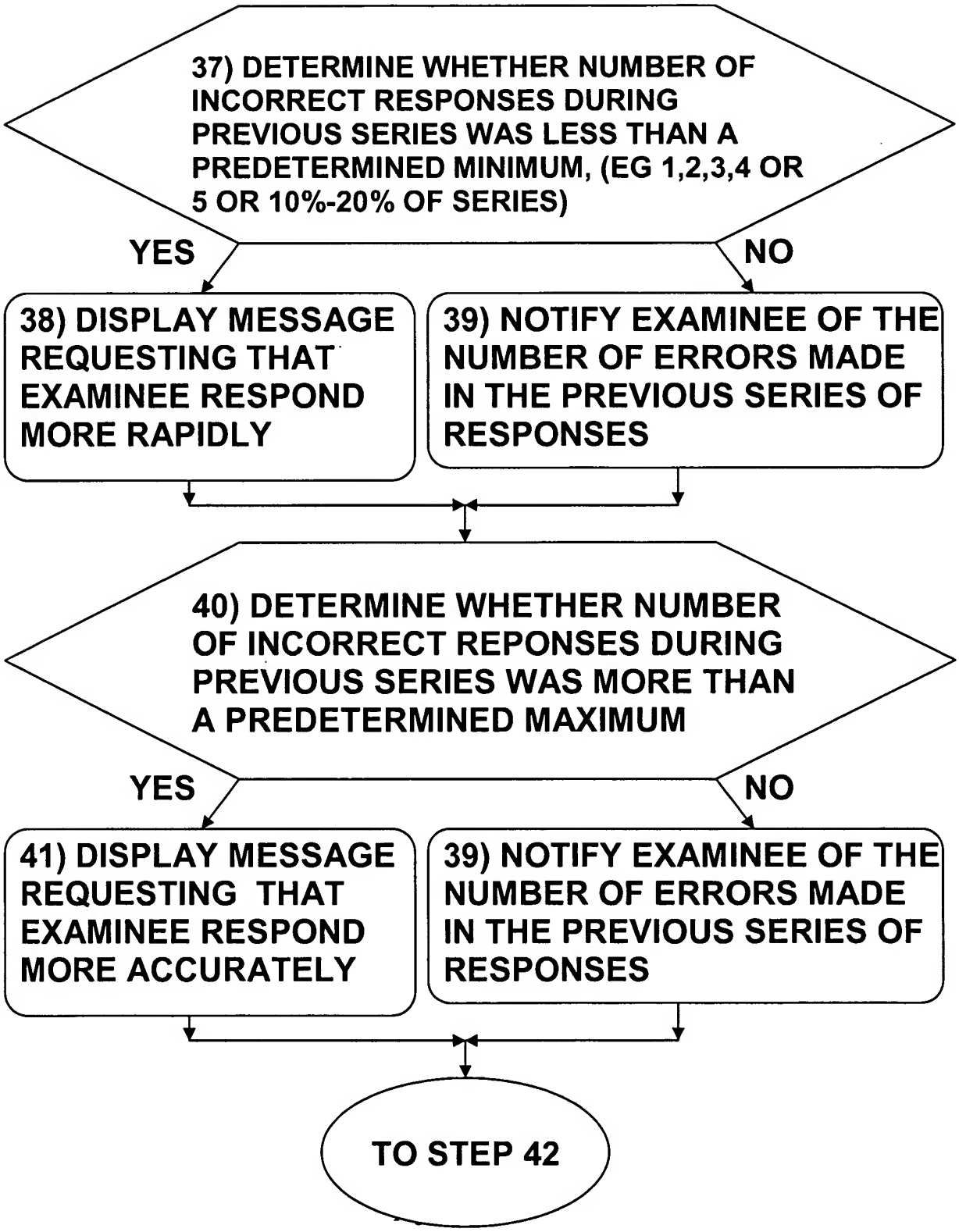
37) DETERMINE WHETHER NUMBER OF INCORRECT RESPONSES DURING PREVIOUS SERIES WAS LESS THAN A PREDETERMINED MINIMUM, (EG 1,2,3,4 OR 5 OR 10%-20% OF SERIES)
YES
NO
38) DISPLAY MESSAGE REQUESTING THAT EXAMINEE RESPOND MORE RAPIDLY
39) NOTIFY EXAMINEE OF THE NUMBER OF ERRORS MADE IN THE PREVIOUS SERIES OF RESPONSES
40) DETERMINE WHETHER NUMBER OF INCORRECT REPONSES DURING PREVIOUS SERIES WAS MORE THAN A PREDETERMINED MAXIMUM
YES
NO
41) DISPLAY MESSAGE REQUESTING THAT EXAMINEE RESPOND MORE ACCURATELY
39) NOTIFY EXAMINEE OF THE NUMBER OF ERRORS MADE IN THE PREVIOUS SERIES OF RESPONSES
TO STEP 42

FIGURE 8A

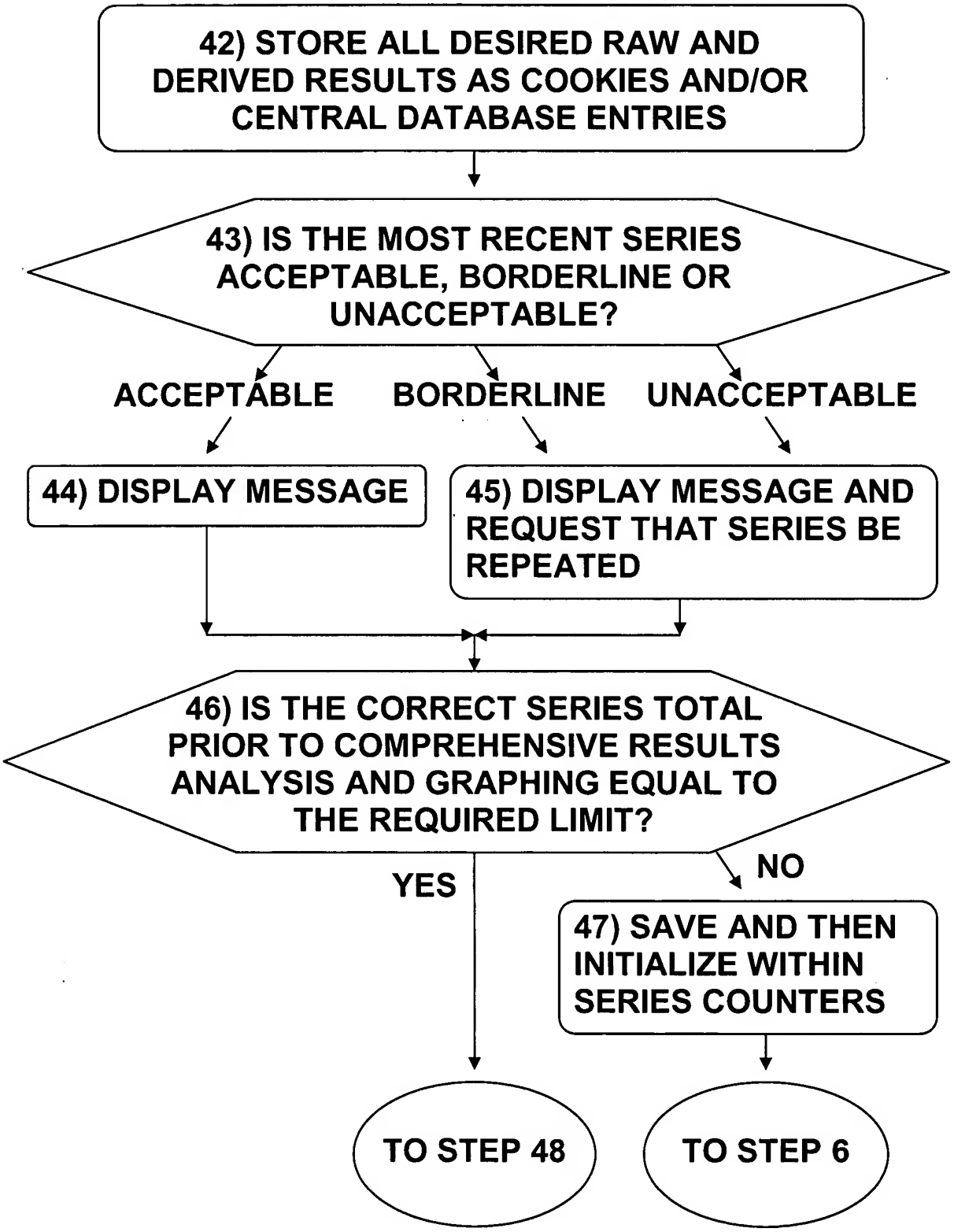
42) STORE ALL DESIRED RAW AND DERIVED RESULTS AS COOKIES AND/OR CENTRAL DATABASE ENTRIES
43) IS THE MOST RECENT SERIES ACCEPTABLE, BORDERLINE OR UNACCEPTABLE?
ACCEPTABLE
BORDERLINE
UNACCEPTABLE
44) DISPLAY MESSAGE
45) DISPLAY MESSAGE AND REQUEST THAT SERIES BE REPEATED
46) IS THE CORRECT SERIES TOTAL PRIOR TO COMPREHENSIVE RESULTS ANALYSIS AND GRAPHING EQUAL TO THE REQUIRED LIMIT?
YES
NO
47) SAVE AND THEN INITIALIZE WITHIN SERIES COUNTERS
TO STEP 48
TO STEP 6

FIGURE 8B

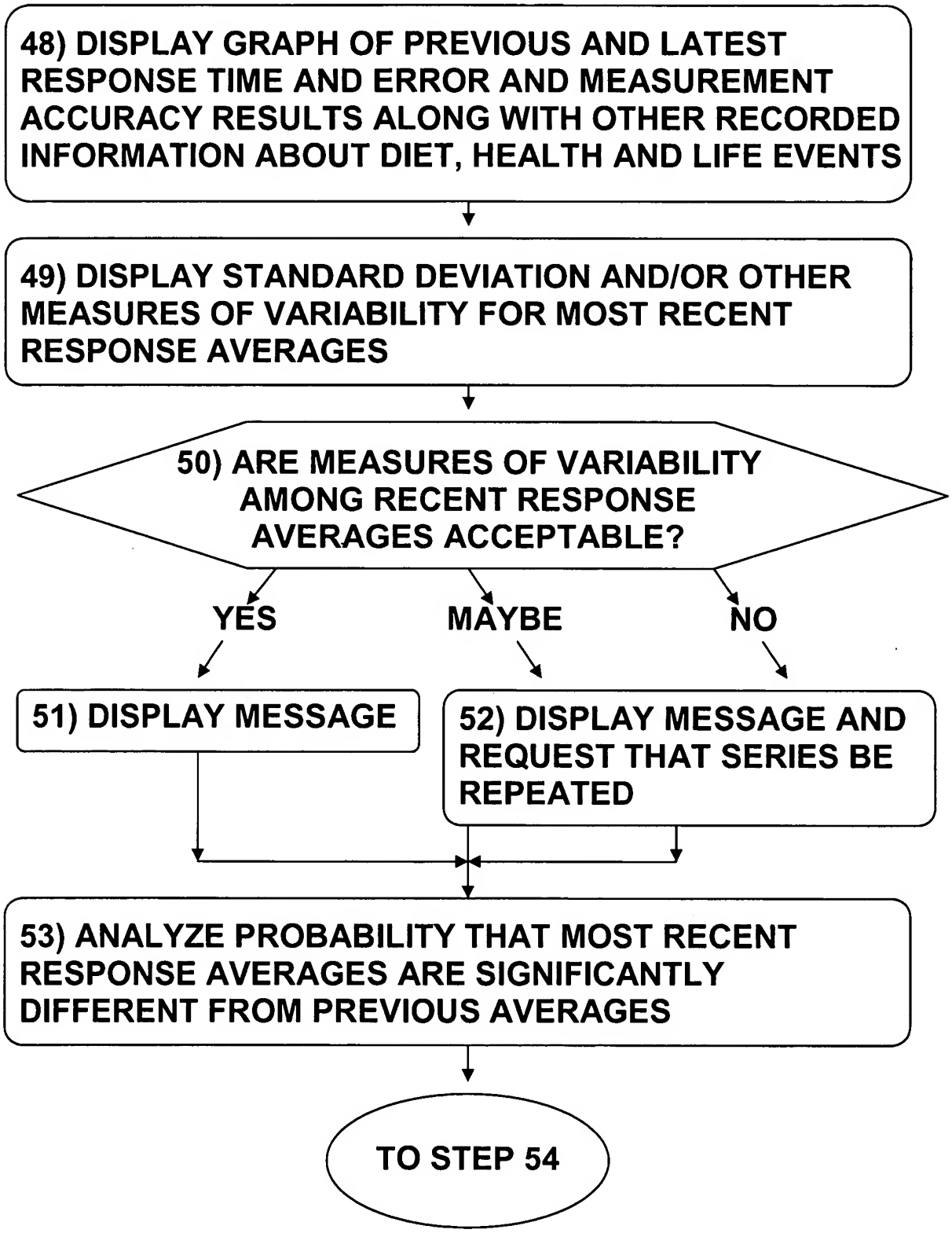
48) DISPLAY GRAPH OF PREVIOUS AND LATEST RESPONSE TIME AND ERROR AND MEASUREMENT ACCURACY RESULTS ALONG WITH OTHER RECORDED INFORMATION ABOUT DIET, HEALTH AND LIFE EVENTS
49) DISPLAY STANDARD DEVIATION AND/OR OTHER MEASURES OF VARIABILITY FOR MOST RECENT RESPONSE AVERAGES
50) ARE MEASURES OF VARIABILITY AMONG RECENT RESPONSE AVERAGES ACCEPTABLE?
YES
MAYBE
NO
51) DISPLAY MESSAGE
52) DISPLAY MESSAGE AND REQUEST THAT SERIES BE REPEATED
53) ANALYZE PROBABILITY THAT MOST RECENT RESPONSE AVERAGES ARE SIGNIFICANTLY DIFFERENT FROM PREVIOUS AVERAGES
TO STEP 54

FIGURE 8C

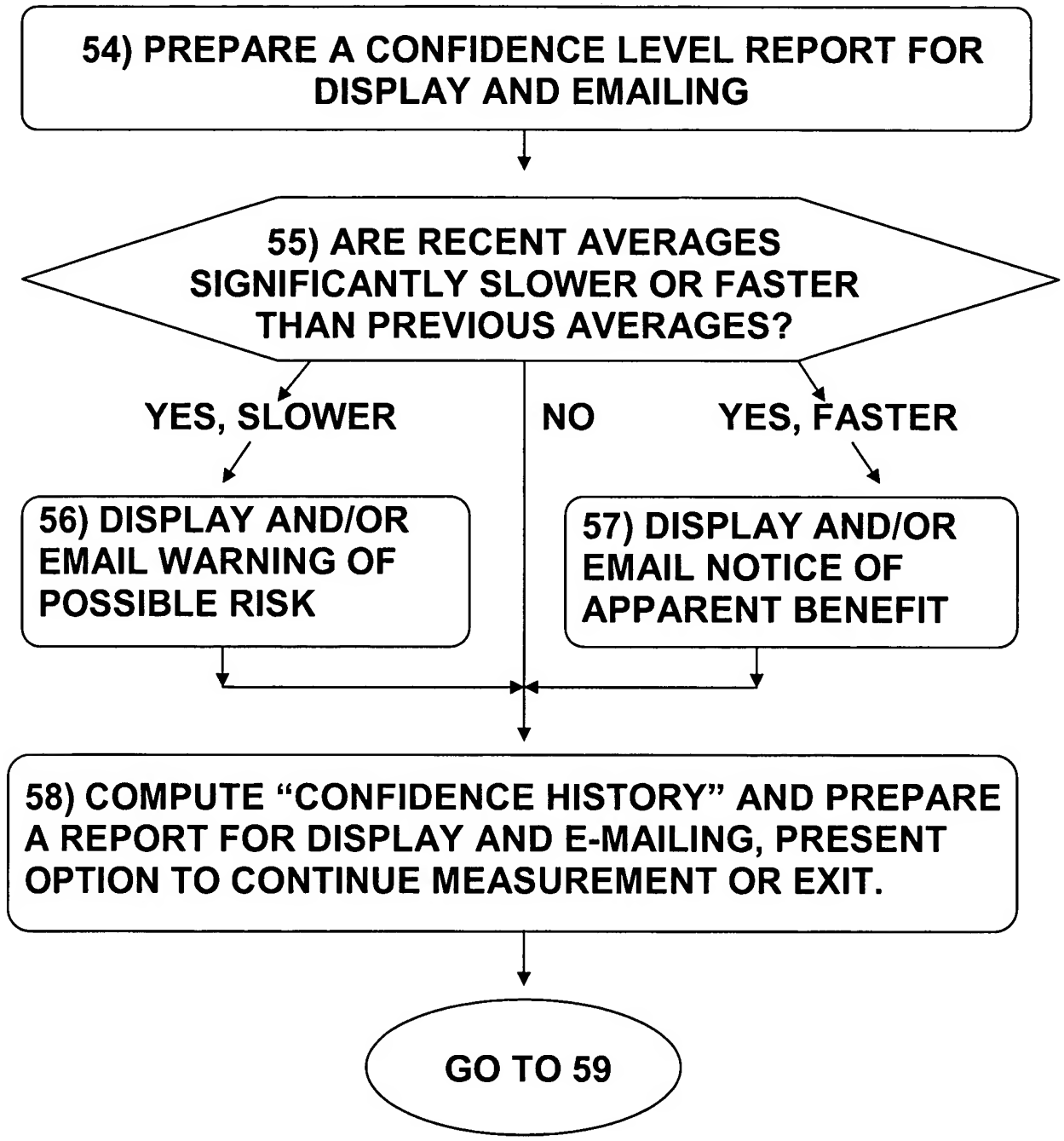
54) PREPARE A CONFIDENCE LEVEL REPORT FOR DISPLAY AND EMAILING
55) ARE RECENT AVERAGES SIGNIFICANTLY SLOWER OR FASTER THAN PREVIOUS AVERAGES?
YES, SLOWER
NO
YES, FASTER
56) DISPLAY AND/OR EMAIL WARNING OF POSSIBLE RISK
57) DISPLAY AND/OR EMAIL NOTICE OF APPARENT BENEFIT
58) COMPUTE "CONFIDENCE HISTORY" AND PREPARE A REPORT FOR DISPLAY AND E-MAILING, PRESENT OPTION TO CONTINUE MEASUREMENT OR EXIT.
GO TO 59

FIGURE 9A: OPTIMIZING HEALTH FACTORS

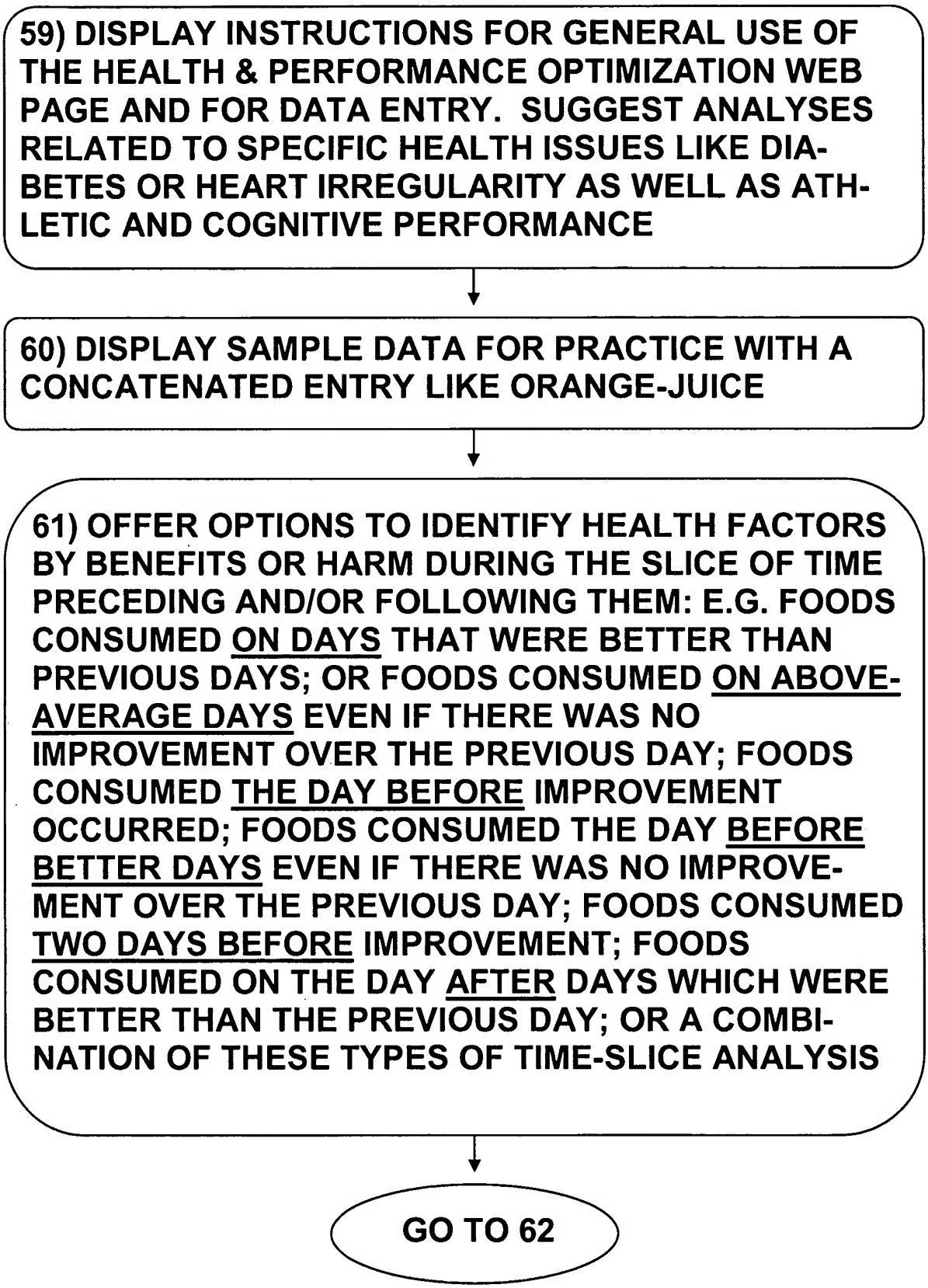

FIGURE 9B

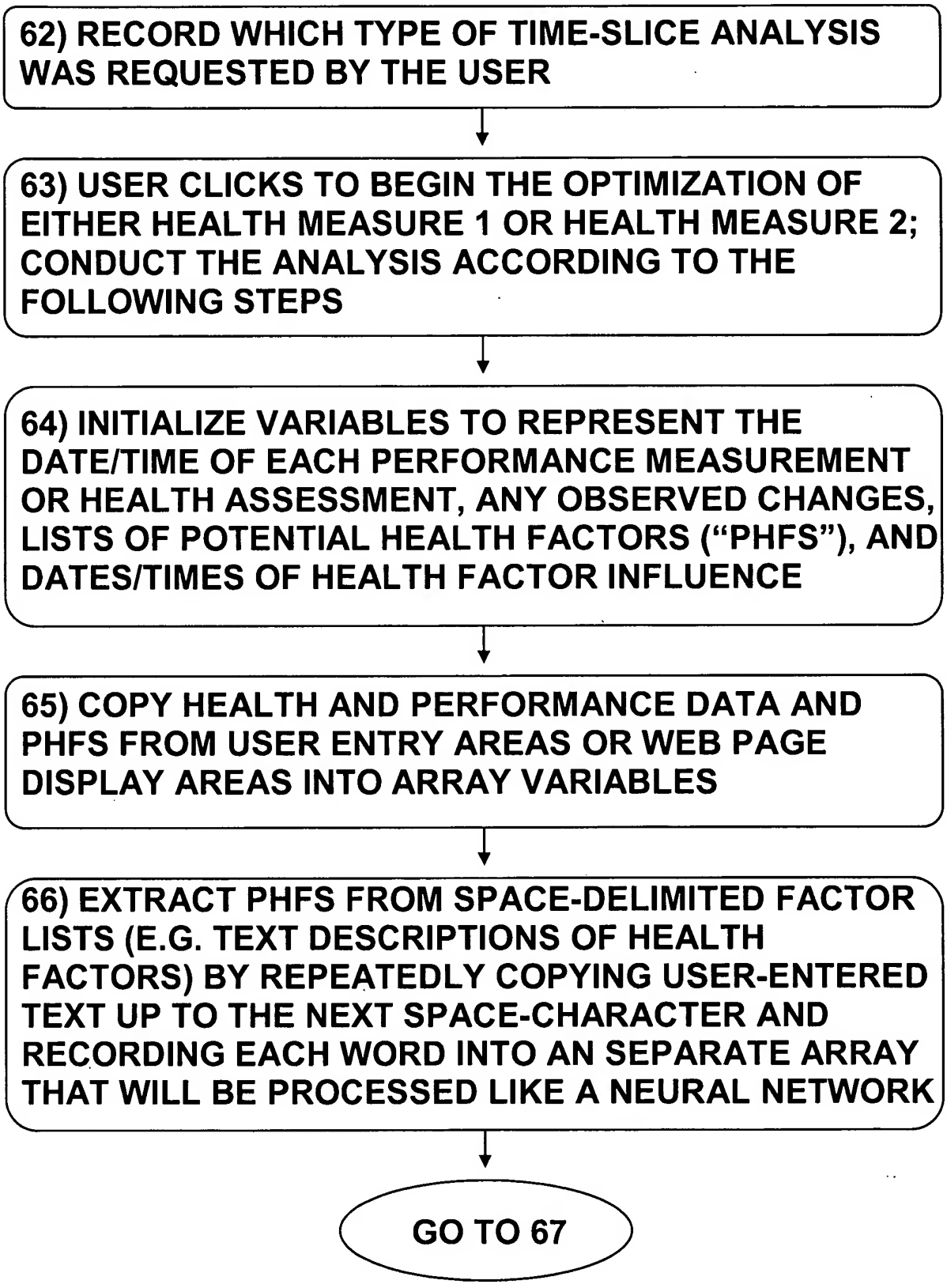
62) RECORD WHICH TYPE OF TIME-SLICE ANALYSIS WAS REQUESTED BY THE USER
63) USER CLICKS TO BEGIN THE OPTIMIZATION OF EITHER HEALTH MEASURE 1 OR HEALTH MEASURE 2; CONDUCT THE ANALYSIS ACCORDING TO THE FOLLOWING STEPS
64) INITIALIZE VARIABLES TO REPRESENT THE DATE/TIME OF EACH PERFORMANCE MEASUREMENT OR HEALTH ASSESSMENT, ANY OBSERVED CHANGES, LISTS OF POTENTIAL HEALTH FACTORS ("PHFS"), AND DATES/TIMES OF HEALTH FACTOR INFLUENCE
65) COPY HEALTH AND PERFORMANCE DATA AND PHFS FROM USER ENTRY AREAS OR WEB PAGE DISPLAY AREAS INTO ARRAY VARIABLES
66) EXTRACT PHFS FROM SPACE-DELIMITED FACTOR LISTS (E.G. TEXT DESCRIPTIONS OF HEALTH FACTORS) BY REPEATEDLY COPYING USER-ENTERED TEXT UP TO THE NEXT SPACE-CHARACTER AND RECORDING EACH WORD INTO AN SEPARATE ARRAY THAT WILL BE PROCESSED LIKE A NEURAL NETWORK
GO TO 67

FIGURE 9C

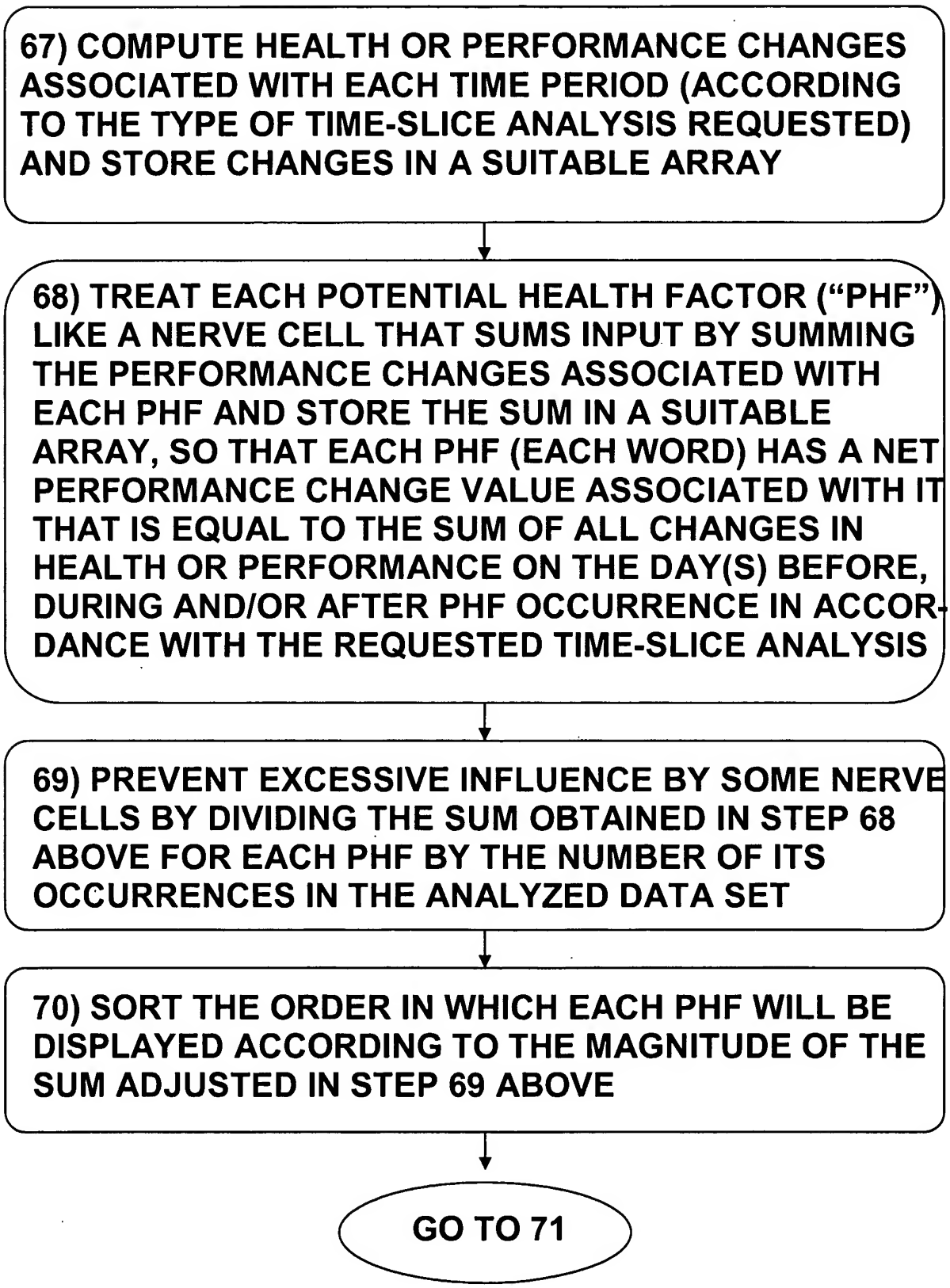
67) COMPUTE HEALTH OR PERFORMANCE CHANGES ASSOCIATED WITH EACH TIME PERIOD (ACCORDING TO THE TYPE OF TIME-SLICE ANALYSIS REQUESTED) AND STORE CHANGES IN A SUITABLE ARRAY
68) TREAT EACH POTENTIAL HEALTH FACTOR ("PHF") LIKE A NERVE CELL THAT SUMS INPUT BY SUMMING THE PERFORMANCE CHANGES ASSOCIATED WITH EACH PHF AND STORE THE SUM IN A SUITABLE ARRAY, SO THAT EACH PHF (EACH WORD) HAS A NET PERFORMANCE CHANGE VALUE ASSOCIATED WITH IT THAT IS EQUAL TO THE SUM OF ALL CHANGES IN HEALTH OR PERFORMANCE ON THE DAY(S) BEFORE, DURING AND/OR AFTER PHF OCCURRENCE IN ACCORDANCE WITH THE REQUESTED TIME-SLICE ANALYSIS
69) PREVENT EXCESSIVE INFLUENCE BY SOME NERVE CELLS BY DIVIDING THE SUM OBTAINED IN STEP 68 ABOVE FOR EACH PHF BY THE NUMBER OF ITS OCCURRENCES IN THE ANALYZED DATA SET
70) SORT THE ORDER IN WHICH EACH PHF WILL BE DISPLAYED ACCORDING TO THE MAGNITUDE OF THE SUM ADJUSTED IN STEP 69 ABOVE
GO TO 71

FIGURE 9D

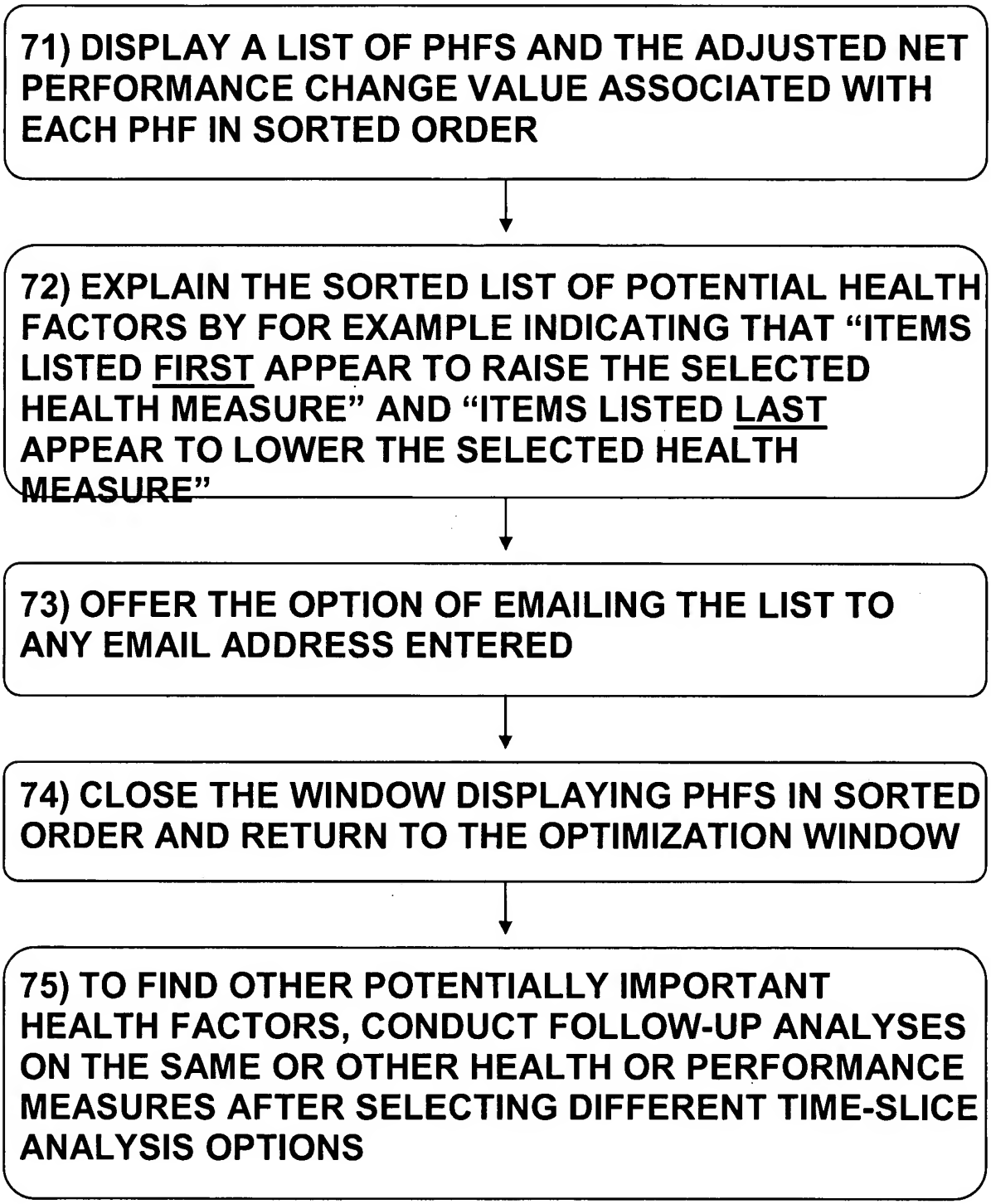
71) DISPLAY A LIST OF PHFS AND THE ADJUSTED NET PERFORMANCE CHANGE VALUE ASSOCIATED WITH EACH PHF IN SORTED ORDER
72) EXPLAIN THE SORTED LIST OF POTENTIAL HEALTH FACTORS BY FOR EXAMPLE INDICATING THAT "ITEMS LISTED FIRST APPEAR TO RAISE THE SELECTED HEALTH MEASURE" AND "ITEMS LISTED LAST APPEAR TO LOWER THE SELECTED HEALTH MEASURE"
73) OFFER THE OPTION OF EMAILING THE LIST TO ANY EMAIL ADDRESS ENTERED
74) CLOSE THE WINDOW DISPLAYING PHFS IN SORTED ORDER AND RETURN TO THE OPTIMIZATION WINDOW
75) TO FIND OTHER POTENTIALLY IMPORTANT HEALTH FACTORS, CONDUCT FOLLOW-UP ANALYSES ON THE SAME OR OTHER HEALTH OR PERFORMANCE MEASURES AFTER SELECTING DIFFERENT TIME-SLICE ANALYSIS OPTIONS

FIGURE 10: ENTRANCE PAGE LAYOUT

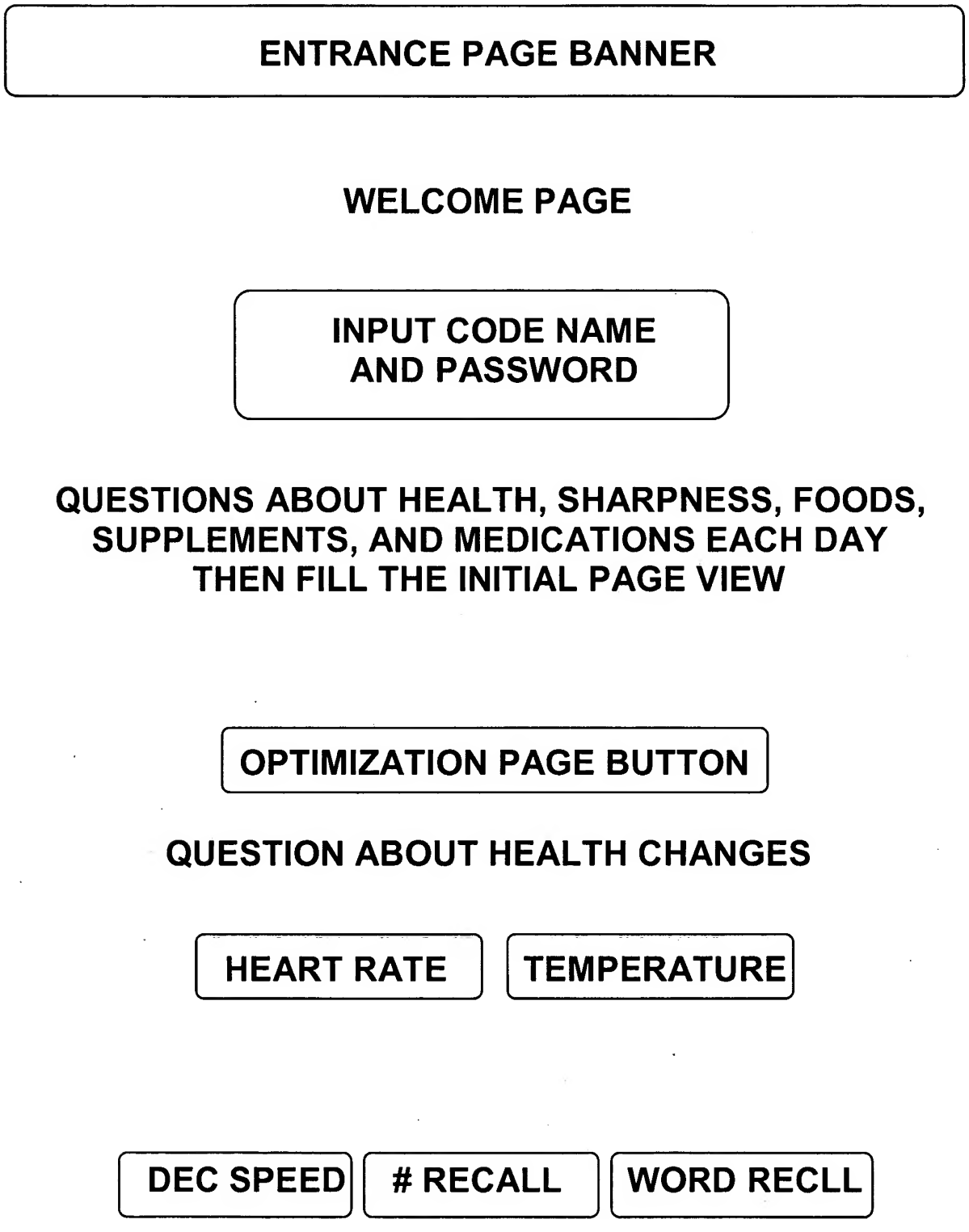

FIGURE 11: OPTIMIZATION PAGE LAYOUT

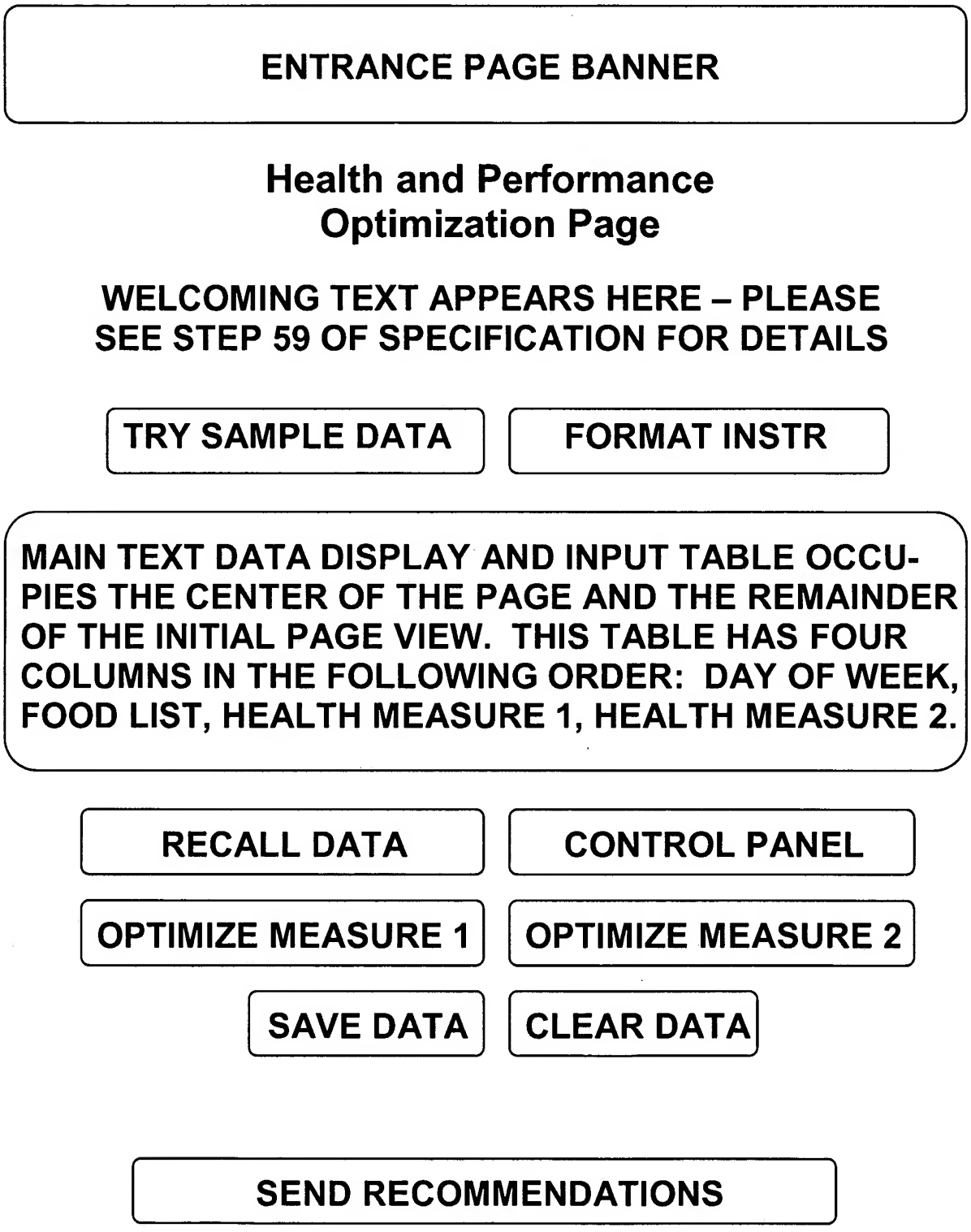

FIGURE 12: ORDERED LIST OF FOODS PRODUCED BY THE OPTIMIZATION PAGE

ITEMS LISTED FIRST APPEAR TO RAISE THE SELECTED HEALTH MEASURE.

FOOD	RATING
OATMEAL	1.5
TEA	1.5
MILK	1
APPLES	0.85
BREAD	0.85
EGGS	0
ORANGE-JUICE	0

ITEMS LISTED LAST APPEAR TO LOWER THE SELECTED HEALTH MEASURE.

SEND EMAIL COPY TO

CLOSE WINDOW